Immunogenetics

Editors
Jan Klein Tübingen, Germany
Jean Dausset Paris, France

Editorial Assistant
M. C. Kimmerle Tübingen, Germany

Volume 27 · 1988

Editorial Board

B. D. Brondz Moscow, U.S.S.R.
P.-A. Cazenave Paris, France
J. Colombani Paris, France
C. David Rochester, Minnesota
T. L. Delovitch Toronto, Canada
A. Ferreira Santiago, Chile
F. Figueroa Tübingen, Germany
G. Gachelin Paris, France
T. J. Gill III Pittsburgh, Pennsylvania
E. Günther Göttingen, Germany
K. Hála Innsbruck, Austria
G. Hämmerling Heidelberg, Germany
P. Iványi Amsterdam, The Netherlands
P. P. Jones Stanford, California
M. Kasahara Miami, Florida
J. A. López de Castro Madrid, Spain
R. G. Mage Bethesda, Maryland
B. Malissen Marseille, France
C. Mawas Marseille, France
I. F. C. McKenzie Melbourne, Australia
N. A. Mitchison London, England
S. Natsuume-Sakai Kanazawa, Japan
H.-G. Rammensee Tübingen, Germany
R. J. Riblet Philadelphia, Pennsylvania
P. J. Robinson Heidelberg, Germany
D. H. Sachs Bethesda, Maryland
T. Sasazuki Fukuoka, Japan
A.-M. Schmitt-Verhulst Marseille, France
E. Simpson Harrow, England
A. Svejgaard Copenhagen, Denmark
R. M. Zinkernagel Zurich, Switzerland

Springer International

Immunogenetics

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e. g., as offprints), as well as translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA:

Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U. S. Copyright Law, provided a fee is paid. This fee is US $ 0.20 per page, or a minimum of US $ 1.00 if an article contains fewer than five pages. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0093-7711, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Printers: Oscar Brandstetter Druckerei GmbH & Co. KG, Wiesbaden

© Springer-Verlag
Berlin Heidelberg 1988

Printed in Germany

Author index

Abplanalp, H. 102
Accolla, R. S. 12
Adkins, B. 180
Aizawa, M. 145, 406
Alonso, M. A. 91
Amiot, M. 187
Andersson, L. 110, 273
Ando, A. 87
Andrews, P. W. 322
Awad, J. 73

Barclay, A. N. 174
Barton, D. E. 91
Behlke, M. A. 51
Bensaid, A. 139
Bergstresser, P. R. 252
Bernard, A. 187
Berry, R. J. 51
Berte, C. C. 167
Bevec, D. 79
Beynon, R. J. 298
Birkenmeier, E. 431
Black, S. J. 139
Bloemer, K. 66
Bloom, S. E. 24, 102
Böhlen, P. 388
Bond, J. S. 298
Bontrop, R. E. 40
Born, W. 121
Boumsell, L. 187
Bray, R. A. 231
Briles, W. E. 102, 127
Brinster, R. L. 436
Brown, G. D. 239
Burtenshaw, M. D. 375
Bushell, A. 456
Butler, P. E. 298

Callahan, G. N. 148
Campbell, R. D. 399
Carrel, S. 12
Cassell, P. G. 73
Castaño, R. 196, 345
Cathala, F. 1
Chapman, V. 431
Charoenwong, P. 46
Chatelain, J. 1
Cherry, M. 383
Choi, Y. 239
Chou, H. S. 51
Clark, E. A. 356
Clarkin, K. 313
Cohen, D. 133
Coury, L. 231
Cross, S. J. 295

Dairiki, K. 293
Daniels, G. L. 322
Dastot, H. 187
Dautheville, C. 1
Davies, C. J. 273
Dawkins, R. L. 46
Day, A. J. 211
Decary, F. 220
Degos, L. 133, 187
Delany, M. E. 24
Delovitch, T. L. 220
Demaine, A. G. 19
de Vries, R. R. P. 40
D'Hoostelaere, L. A. 51, 396
Dietert, R. R. 24
Dobbe, L. M. E. 203
Doménech, N. 196, 345
Duncan, R. 215
Dunckley, H. 392
Dupont, B. 281

Eckels, D. D. 31
Egan, G. 239
Eichwald, E. J. 137
Elferink, D. G. 40
Ennis, P. D. 281
Evans, E. P. 375
Ezquerra, A. 196, 345

Faas, S. 436
Fabbi, M. 187
Fernandez, N. 363
Festenstein, H. 73, 363
Fielder, A. H. L. 442
Fischer Lindahl, K. 96
Flanagan, M. P. 465
Francke, U. 91
Fujii, H. 406
Fujimori, T. 293
Fukasawa, Y. 145

Gagnon, J. 265
Gatenby, P. A. 392
Gaur, L. K. 356
Gebel, H. 231
Giles, C. M. 442
Gillet, D. 133
Giphart, M. J. 40, 203
Gmünder, H. 388
Goetz, J. 442
Goodfellow, P. N. 70, 322
Gorski, J. 167
Goto, R. 102, 127
Gottesdiener, K. M. 231
Gottschalk, L. 231
Goundis, D. 259
Green, W. R. 304
Grosveld, F. G. 148
Guardiola, J. 12

Hansen, J. A. 256
Harada, Y.-N. 153
Hartzman, R. J. 31
Hashimoto, Y. 57
Hauptmann, G. 442
Heise, E. R. 356
Hitman, G. 73
Hogarth, P. M. 383
Holme, E. 295
Honda, Y. 87
Honjo, T. 288
Houlden, B. A. 383
Huang, S. K. 370
Hui, K. M. 148
Huppi, K. E. 51, 215, 396
Hyman, R. 313

Ichihara, Y. 330
Ikegami, S. 293
Inoko, H. 87
Isacke, C. M. 460
Ishikawa, N. 145
Ives, M. 137

Jewett, L. 436
Johnson, A. H. 31
Johnson, L. L. 159
Johnson, P. 70
Jouvin-Marche, E. 51
Juji, T. 87
Jung, Y. C. 465

Kagnoff, M. F. 460
Kay, P. H. 46
Kemp, S. J. 139
Kiuchi, Y. 57
Klein, J. 77, 229
Knowles, B. B. 436
Kojima, H. 145
Kornbluth, J. 231
Kurosawa, Y. 330
Kuziel, W. A. 121

Labeta, M. O. 363
Landay, A. L. 231
Latham, S. E. 383
Leiden, J. M. 231
Lesslauer, W. 388
Letarte, M. 460
Lewin, H. A. 338
Lock, C. B. 449
Loh, D. Y. 51
López de Castro, J. A. 196, 345
Lundén, A. 273
Lyon, M. F. 375

Mach, B. 167
Maeda, H. 87
Maffei, A. 12
Martin, E. 46
Matsuki, K. 87
Matsuno, Y. 406
Matsuoka, H. 330
Mavrothalassitis, G. J. 426
McAdam, R. A. 259
McKenzie, I. F. C. 383
Mellor, A. L. 79
Meruelo, D. 239
Mikulski, M. M. A. 40
Miller, M. M. 102, 127
Millot, P. 1
Minamide, L. S. 148
Miyada, C. G. 102
Mizuno, K. 406
Mock, B. A. 51, 396
Moriwaki, K. 57, 153
Mornet, E. 133
Morris, M. 174
Morris, P. J. 456
Morse, H. C., III 396

Naessens, J. 139
Nakamura, S. 293
Nakauchi, H. 288
Natori, T. 406
Navarrete, C. 73
Neefjes, J. J. 203
Niiyama, T. 406
Niven, M. J. 73
Nolan, T. J. 338

O'Brien, S. J. 414
Okada, J. 330
Okubo, Y. 322
Okumura, K. 288
Ollier, W. 442
Omary, M. B. 460
O'Neill, G. J. 295

Papamatheakis, J. 426
Parham, P. 281
Parkes, J. D. 449
Parnes, J. R. 396
Passmore, H. C. 298
Pla, M. 133
Porter, R. R. 399
Potter, M. 215
Povey, S. 322
Pym, B. 322

Quertermous, T. 231

Ragoussis, J. 66
Rask, L. 110, 273
Rathbun, G. A. 121
Reckelhoff, J. F. 298
Reid, K. B. M. 259
Rich, R. F. 304
Ripoche, J. 211
Rittner, C. 225, 442
Robinson, P. J. 79
Robson, T. 442
Rocca, A. 133
Rosen-Bronson, S. 31
Rothschild, M. F. 465

Sachs, J. A. 73
Sakaizumi, M. 57
Salmon, D. 1
Schendel, D. J. 61
Schneider, P. M. 225
Seidman, J. G. 231
Seldin, M. F. 396
Serjeantson, S. W. 392
Shapiro, S. Z. 139

Sheer, D. 322
Shelby, J. 137
Shinkai, Y. 288
Sigurdardottir, S. 273
Sim, R. B. 211
So, A. K. L. 449
Spurr, N. K. 70
Sriram, S. 370
Stam, N. J. 203
Steinberg, A. D. 396
Steinmetz, M. 96
Stewart, J. A. 338
Streilein, J. W. 252
Strominger, J. L. 231
Suzuki, A. 57

Tada, N. 293
Tajima, Y. 145
Tamaoki, N. 293
Tanigaki, N. 167
Taube, D. H. 19
Taylor, B. A. 383
Teale, A. J. 139
Termijtelen, A. 40
Thanos, D. 426
Tibensky, D. 220
Tidmarsh, G. F. 180
Tilanus, M. G. J. 40
Tomita, T. 153
Torii, S. 330
Tosi, R. 167
Trowbridge, I. S. 460
Trowsdale, J. 449
Tse, A. G.-D. 265
Tsuchimoto, S. 406
Tsuge, I. 330
Tsuji, K. 87
Tucker, P. W. 121

Uematsu, Y. 96
Uring-Lambert, B. 442

van Rood, J. J. 40
Vaughan, R. W. 19
Veitch, J. 295

Wakisaka, A. 145
Wallace, R. B. 102
Warner, C. M. 465
Watanabe, Y. 293
Weiss, E. H. 66, 79
Weissman, I. L. 180
Welsh, K. I. 19, 449
Wettstein, P. J. 431, 436
Whaley, K. 295
Williams, A. F. 174, 265
Williams, B. P. 322
Willis, A. C. 211
Willison, K. R. 375
Wood, K. J. 456
Wu, M.-C. 338

Yamakawa, T. 57
Yasui, H. 330
Young, S. 102
Yu, C. Y. 399
Yuhki, N. 414

Zemmour, J. 281
Zenthon, J. 375
Ziegler, A. 61, 66

Book reviews 78, 157, 230, 301, 302, 470

Subject index

AKR/Gross virus
–, CTL response 304
Akv provirus
–, CTL response 304
APH-2 polymorphism 153

B-complex
–, chicken, recombination 127
–, cloning of *B-G* subregion 102
B-G region
–, cloning 102
B-lineage transformation-associated antigen 180
Blood groups
–, OK^a antigen 322
BoLA
–, BLV association 338
–, cloning of *DQ* genes 110
–, immunochemical analysis 139
–, linkage map 273
Bovine leukemia virus
–, and BoLA antigens 338

C4
–, quantification 295
C4A/C4B isotypes 399
C4A gene
–, polymorphism 225
C4 alleles
–, Thai/Chinese supratypes 46
C4 allotypes
–, human 442
Cat
–, MHC class II genes 414
Cattle
–, BoLA 338
–, BoLA antigens 139
–, BoLA mapping 273
–, MHC cloning 110
CD1
–, intermolecular complexes 187
CD28 antigen
–, sequence 388
C3Hf/HeN mice
–, H-2K sequence 148
Chicken
–, B-G clone 102
–, *B-G* recombination 127
–, MHC dosage 24
Chido antigen
–, model 399
Complement
–, C4A/C4B 399
–, C4 allotypes 442
–, *C4A* polymorphism 225
–, Chido/Rodgers 399
–, *C1q* mutation 259
–, C4 quantification 295
–, factor B polymorphism 225
–, factor H 211
Contact hypersensitivity
–, UV effect 252
C1q, mutation 259

DQw3 α-β associations 456

E^q_α gene
–, molecular analysis 426
Epitope mapping
–, HLA-A2 196

Factor B
–, polymorphism 225
Factor H
–, polymorphism 211

Gene conversion
–, in HLA-DR 167
GM1 (*NeuGc*) gene
–, mapping 57
H-28^c antigen
–, antigraft response 159
Heart transplantation
–, H-Y antigen 137
H-2K gene
–, sequence 148
HLA-A2
–, T-cell epitopes 196
HLA-A molecules
–, public epitope 61
HLA-A2 variant 345
HLA-Bw47 to *HLA-B13*
–, 21-hydroxylase deficiency 281
HLA-C gene
–, transcription 220
HLA class I
–, in serum 203
HLA class II
–, systemic lupus erythematosus 392
HLA-DQ
–, T-cell clones 145
HLA-DQ$_\alpha$
–, and narcolepsy 87
HLA-DR
–, polymorphism 40
–, sequence serology correlation 167
HLA-DR, DQ, and DX
–, RFLP 73
HLA-DR1 through DRw8
–, clonal analysis 31
HLA-DR2
–, and narcolepsy 449
HLA-DR4 haplotype
–, recombination between DQ_α and DQ_β 456
HLA epitopes
–, macaques 356
HLA$_\alpha$ gene region
–, molecular genotyping 12
HLA novel class II molecule 363
Hot spots of recombination 96
H-2TL region
–, molecular mapping 239
H-Y antigen
–, heart transplantation 137
21-hydroxylase
–, polymorphism 133

21-hydroxylase deficiency
–, *HLA-Bw47* to *HLA-B13* 281

IgE^a and IgE^b alleles
–, in mice 288
Immune suppression gene and Mhc class II molecules 406
Immunoglobulin gene
–, rearrangement 330
Immunoglobulin polymorphism
–, and nephropathy 19
In memoriam
–, Sir Peter Medawar 303
Is-BI 406

L3T4 antigen
–, mapping 396
Ly-6
–, in squid 265
–, Myc-1 linkage 215
Ly-1 antigen
–, relationship to Ly-12.1 383
Ly-4 antigen
–, mapping 396
Ly-12.2 antigen
–, relationship to Ly-1 383
Ly-36 antigen 293
Ly-3 gene
–, localization 70
Lymphotoxin
–, gene localization 66
Ly-2/3 region
–, Ly-35 antigen 293

Macaques
–, HLA epitopes 356
MAL
–, mapping 91
Mep-1 gene
–, mapping 298
MHC dosage
–, in B cells 24
Minor H antigens
–, and *p* mutation 431
–, SV40 T antigen 436
Myc-1
–, mapping 215
Myelin basic protein-specific T lymphocytes 370

Narcolepsy
–, and *HLA-DQ*$_\alpha$ 87
–, HLA-DR2 association 449
Natural killer cells
–, Tcr expression 231
Nephropathy
–, and Tcr 19
–, Ig polymorphism 19
NK cells
–, Tcr expression 231

OK^a antigen 322
OLA complex 1

p85
–, and Pgp-1 460
Pgp-1
–, and p85 460
Pig
–, SLA 465
p mutation
–, and minor H antigens 431
Polymorphism
–, *HLA-DR* 40
Public epitope
–, HLA-A molecules 61

Q4 gene
–, sequence 79

Rat
–, Tcr β sequence 174
Rearrangement
–, immunoglobulin gene 330
Recombinational hot spots 96
Rodgers antigen
–, model 399

Scrapie susceptibility/resistance 1
Serum
–, HLA molecules 203
Severe combined immunodeficiency
–, Ig rearrangement 330
Sheep MHC 1
Sir Peter Medawar
–, in memoriam 303
SLA complex
–, RFLP analysis 465
Squid
–, Thy-1 antigen 265
–, Ly-6 antigen 265
SV40 T antigen 436
Swine
–, SLA 465
Systemic lupus erythematosus
–, HLA class II 392
–, T-cell receptor 392

T antigen 436
T90/44 antigen
–, sequence 388
T-cell clones
–, HLA-DQ specificity 145
T-cell differentiation gene
–, *MAL*, mapping 91
T-cell receptor
–, and nephropathy 19
–, diversity of $C_\gamma 1$ 121
–, in NK cells 231
–, systemic lupus erythematosus 392
T cell receptor β chains
–, in rat 174
T-cell receptor $V_{T\beta}$
–, in wild mice 51
t-complex
–, mapping 375
Tcr
–, diversity of $C_\gamma 1$ 121
T13, T14, T15 genes 239
Thy-1 gene
–, in pre-B cells 313
Thy-1 in squid 265
Thymus
–, CD1 expression 187
–, epithelial cells 180
Tla region
–, mapping 239
T-lymphocyte clones
–, DR1 through DRw8 31
Tumor necrosis factor
–, gene localization 66

UV radiation and contact sensitivity 252

Wild mice
–, Tcr polymorphism 51

X-linked agammaglobulinemia
–, Ig rearrangement 330